# FACT SHEET for State Waste Discharge Permit No. ST-7425 J. H. Baxter & Company

This fact sheet is a companion document to the State Waste Discharge Permit No. ST-7425 for J. H. Baxter & Company in Arlington, Washington. The Model Wood Preserving Permit fact sheet referenced in this fact sheet is also attached. The Department of Ecology (the Department) is issuing this permit which will allow discharges of stormwater onto land surface.

This site specific fact sheet and the referenced fact sheet explain the nature of the discharge, the Department's decisions on limiting the pollutants in the stormwater, and the regulatory and technical basis for those decisions.

| GENERAL INFORMATION |   |  |  |  |  |  |
|---------------------|---|--|--|--|--|--|
| Applicant:          | J. H. BAXTER & COMPANY<br>P.O. Box 5902<br>San Mateo, CA 94402-0902                                     |  |  |  |  |  |
| Facility Location:  | 6520 188th Street NE<br>Arlington, WA 98223<br>Snohomish County   |  |  |  |  |  |
| Contact:            | Ms. Georgia Baxter<br>Vice-President Environmental Services<br>(650) 349-0201                           |  |  |  |  |  |
| Permit Number:      | ST-7425   |  |  |  |  |  |
| Type of Industry:   | Pressure Wood Treating  |  |  |  |  |  |
| Receiving Water:    | Stormwater Discharge onto the Land Surface  |  |  |  |  |  |
| Discharge Location: | Latitude: 48° 10' 00" N<br>Longitude: 122° 08' 45" W<br>Township 31N, Range 5E, NE Corner of Section 22 |  |  |  |  |  |

# TABLE OF CONTENTS

| TABLE OF CONTENTS                              | 2  |
|--|----|
| INTRODUCTION                                   | 3  |
| BACKGROUND INFORMATION                         | 4  |
| DESCRIPTION OF THE FACILITY                    | 4  |
| History  | 4  |
| Industrial Process                             | 5  |
| Wastewater Source and Treatments               | 5  |
| French Drain Locations                         |    |
| Ground Water                                   |    |
| PERMIT STATUS                                  |    |
| SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT |    |
| POLLUTANTS OF CONCERN                          | 9  |
| STORMWATER CHARACTERIZATION                    | 9  |
| PROPOSED PERMIT LIMITATIONS AND CONDITIONS     | 10 |
| GROUND WATER                                   |    |
| COMPLIANCE SCHEDULE                            |    |
| MONITORING AND REPORTING                       | 13 |
| LAB ACCREDITATION                              | 14 |
| REPORTING AND RECORDKEEPING                    | 14 |
| OTHER PERMIT CONDITIONS                        | 14 |
| GENERAL CONDITIONS                             | 15 |
| PERMIT ISSUANCE PROCEDURES                     | 15 |
| PERMIT MODIFICATIONS                           |    |
| RECOMMENDATION FOR PERMIT ISSUANCE             |    |
| REFERENCES FOR TEXT AND APPENDICES             | 16 |
| APPENDIX A—PUBLIC INVOLVEMENT INFORMATION      | 17 |
| APPENDIX B—GLOSSARY                            | 18 |
| APPENDIX C—SITE MAPS                           | 20 |
| APPENDIX D—RESPONSE TO COMMENTS                | 23 |

### INTRODUCTION

Chapter 173-200 WAC of the Ground Water Quality Standards requires that a facility possess a State Waste Discharge Permit, if the site has the potential to contaminate ground water quality through the practice of applying waste fluids onto the land surface. This permit is a state waste discharge permit as authorized under Chapter 90.48 RCW which defines the Department's authority and obligations in administering the State Waste Discharge Program.

All underground injection activities are regulated by the Department's Underground Injection Control (UIC) program regulations (Chapter 173-218 WAC). Authorized under the Safe Drinking Water Act (40 CFR 144-147), the primary mission of this program is to protect all underground sources of drinking water. The Environmental Protection Agency (EPA) Region X formally delegated the UIC program to the Department in 1984. The Department currently regulates all injection activities in the State. Under the State's UIC regulations, the disposal of industrial fluids, and stormwater that is contaminated and/or potentially contaminated into the subsurface by means of injection wells, is prohibited. Currently, there are no provisions in state regulations for authorizing by permit, the use of Class V shallow injection wells for disposal activities within the State. All injection activities must meet the State's Ground water Quality Standards in order to be in compliance with the State's UIC regulations.

The regulations adopted by the State include procedures for issuing permits (Chapter 173-220 and 216 WAC), water quality criteria for surface and ground waters (Chapters 173-201A and 200 WAC), and sediment management standards (Chapter 173-204 WAC). These regulations require that a permit be issued before discharge of stormwater to waters of the state is allowed. The regulations also establish the basis for effluent limitations and other requirements which are to be included in the permit. One of the requirements for issuing a permit under the State Waste Discharge permit program is the preparation of a draft permit and an accompanying fact sheet. The proposed permit is issued under the authorization of Chapter 173-216 WAC. This is not an Underground Injection Control Permit.

Public notice of the availability of the draft permit and fact sheet is required at least thirty days before the permit is issued (WAC 173-216-090). The fact sheet and draft permit are available for review (see <u>Appendix A—Public Involvement</u> of the fact sheet for more detail on the Public Notice procedures).

The fact sheet and draft permit have been reviewed by the Permittee. Errors and omissions identified in this review have been corrected before going to public notice. After the public comment period has closed, the Department will summarize the substantive comments and the response to each comment. The summary and response to comments will become part of the file on the permit and parties submitting comments will receive a copy of the Department's response. Comments and the resultant changes to the permit will be summarized in Appendix D—Response to Comments.

#### **BACKGROUND INFORMATION**

#### DESCRIPTION OF THE FACILITY

#### HISTORY

The J. H. Baxter (Baxter) facility at Arlington is a wood preserving operation that specializes in pressure treatment and butt end treatment of poles (Figure 1). The facility has been in operation since 1971 using pentachlorophenol (PCP) and creosote as preservatives. Creosote use was discontinued in 1990. Baxter produces primarily 40 to 45 foot utility poles but has the capacity to treat 20 to 130 foot poles. Baxter treats approximately 40,000 poles using 200,000 gallons per year of an organic-based preservative containing approximately 5% pentachlorophenol (PCP).

The facility encompasses approximately 52 acres, 17 of which are used for pole treatment operations, 28 for untreated pole storage and pole peeling, and 7 acres as a woodwaste landfill. The landfill is now closed. The site is divided into two parcels, A and B. All pole treating and treated pole storage activities are conducted in parcel A. Parcel B contains the untreated pole storage area and pole peeling operations. There has not been pole treating or treated pole storage operations on this parcel. There are two rail spurs leading into the site that are presently not used. The rail tracks outside the treating building are used to load the untreated poles into the retorts. Roofed drip pads are located on the north side of the treatment building.

The topography of the site is flat. Approximately 90% of the area is not paved, 10% of the area is covered with impervious surfaces in the form of buildings including the treating buildings (retort and butt areas), office building, yard office, two shops, pole peeling structures, pole incisor, and lunch room. An overview of the facility layout is shown on Figure 2. The main road on the site passes between the treatment area and the former landfill prior to entering the untreated wood storage area. The roadway is generally higher in elevation than the pole storage areas.

Current management practice of stormwater runoff for the site primarily occurs through surface impoundments on the land surface, via a ditch in the treated product storage area and in depressed areas in the untreated wood storage area, and then is disposed of underground through series of french drains which have been classified by the Department as shallow injection wells. Stormwater runoff from the roadway areas generally flows overland into adjacent ditches (if present), or ponds in low spots throughout both treated and untreated product/wood storage areas. It is the Department's understanding that the french drains were installed to facilitate drainage in some of the areas that were ponding and hindering plant operations. During heavy storm events, most of the french drain locations have been observed to be flooded as documented in inspection reports. There are a total of 26 french drains on-site (more discussion will be presented under French Drain Locations).

### FACT SHEET FOR PERMIT No. ST-7425 J.H. BAXTER & COMPANY

#### **Industrial Process**

Baxter employs two treatment processes: 1) pressure treating within a retort through water extraction, and 2) a thermal treatment system which treats only the butt ends of the poles. Both processes use a PCP-only mixture for the treatment preservative. The PCP treatment process is described in the attached model fact sheet. (The information presented in the attached Model Wood Preserving Fact Sheet is used as a reference to this site-specific permit and fact sheet).

#### WASTEWATER SOURCE AND TREATMENTS

### **Process Wastewater**

Process wastewater has been documented to be periodically discharged from the facility, primarily from the cooling tower emissions, tracking of PCP contaminated equipment to and from the treated product and untreated wood storage areas, and drippage on the apron of the drip pad and the treated wood product area. The process wastewater collection system collects, and treats much of the water that is collected within the treatment area, for use as make-up water for cooling processes needed in the treatment process. The excess water is sent through the cooling tower, and then is evaporated into the air. Oils are recycled back into the process. Approximately 90% of the process area is roofed.

### Stormwater

Currently, stormwater is being disposed of into the subsurface through the use of 26 french drains which are located throughout both the treated product and untreated wood storage areas. The pollutants that have been detected in the stormwater runoff appear to result from the stormwater mediated leaching of treated wood storage products, and cooling tower/evaporation drift. Activated carbon units have been installed to limit the amount of PCP resulting from cooling tower drift.

Based on the submitted Discharge Monitoring Reports (DMRs), stormwater from the treated wood storage area contains average PCP level of 340 ppb. Ground water beneath the treated wood storage area contains an average PCP level of 80 ppb. Eight separate stormwater samples from two storm events and two samples of PCP treating solution were analyzed for dioxin/furan. Based on the results, stormwater runoff entering the infiltration drains contained concentrations of dioxins/furans (in terms of toxic equivalency, TEQ), ranging from 26 to 13,568 ppq (2,3,7,8 TCDD ranged from 2.4 to 29.6 ppq TEQ). These values exceed the ground water standard for dioxin/furan (0.6 ppq in terms of TEQ for TCDD). More dioxin information is provided in the "The Washington State Dioxin Source Assessment" published July 1998 (publication no. 98-320). No information is available on whether dioxins have been detected in the ground water.

Stormwater from the untreated wood storage area contains an average PCP concentration of 32 ppb.

For more information, the three categories of stormwater areas of contact and potential for contamination are discussed in the attached model fact sheet.

## FRENCH DRAIN LOCATIONS

The french drains were first installed in March 1991 and were installed on an as needed basis in areas where ponding hindered operations, prior to the issuance of the previous permit. The locations of the 26 french drains are depicted in Figure 2.

The french drains that are located at the site are designed as Type 1 catch basin (Snohomish County Standard Plan Number 9-050, typically a 22 x 26 x 44 inch concrete box) with two 12 inch diameter perforated pipes that extend 40 feet horizontally. The perforated pipe is laid in a four-foot deep trench with approximately eight to twelve inches of gravel surrounding the pipe. Stormwater runoff flows into the catch basin from the inlet grate at the top. Most of the french drains are not connected to each other, except for french drains 13 and 14, and have inflow only from the grate inlet. French drains 13 and 14 are connected to each other through the use of an underground perforated horizontal pipe. In the event that french drains 13 and 14 do not properly drain, a sump pump has been installed into french drain 14 which pumps any additional "overflow" stormwater from the catch basin into an adjacent ditch which is designed to flow into french drain 23.

All the catch basin grates are underlaid by geotextile fabric to reduce the amount of silt entering the disposal system. However, the silt is so fine that it often plugs up the french drain. During heavy storm events, most of the french drain locations have been observed to be flooded. According to the plant manager, a gravel bed around many problem drain areas seems to be working well to reduce the amount of silt.

Based on recent information collected by the Department, it appears that six of the 26 french drains at the site have been used to inject dangerous or industrial waste fluids into or above an underground source of drinking water. These six french drains, which are located in the treated product storage area, will be immediately closed, sampled, and remediated for soil and ground water contamination. The remaining 20 french drains in the untreated wood storage area will be periodically sampled and monitored for PCP. In the event that PCP is found in the sampled stormwater, the french drain receiving the contaminated runoff will also be closed, sampled and remediated in accordance with the Department's UIC regulations.

J. H. Baxter received an Agreed Order No. 99-TC-N405 from the Department's Toxic Cleanup Program (TCP) on June 30, 1999. This Order is issued pursuant to the authority of the Model Toxics Control Act Cleanup Regulation (RCW70.105D.050(l)). The Agreed Order requires J. H. Baxter to conduct a Remediation Investigation (RI) and a Feasibility Study (FS) for the site. The study will address stormwater control measures, which may include, but are not limited to, pavement work, design of a stormwater treatment and disposal system. J. H. Baxter submitted a draft RI study to the Department's TCP for review and approval on March 2000.

## French Drains in the Treated Pole Storage Area - Parcel A

French drains numbered 13, 14, 23, 24, 25 and 26 are located within Parcel A. These six french drains will be closed and the surrounding soil and ground water will be sampled and remediated due to the presence of dangerous wastes. Although french drain number 16 is located in Parcel B (designated as the untreated wood storage area), entrance of contaminated water may be a concern because it is located nearby the kilns and the rail track portion of the treating plant area.

### French Drains in the Untreated Pole Storage Area – Parcel B

French drains number 1 through 12, and 16 through 22 are located within Parcel B where bark peeling, cutting, incising, drilling and re-sawing processes of untreated wood are conducted. A significant quantity of wood waste is generated from this process, with the majority sold to Everfield Lumber for use as boiler hog fuel. Although the composite sampling from this area has indicated a relatively high level of PCP being potentially disposed through the use of the french drains in the untreated wood storage area, additional monitoring will be required to determine the specific extent of the contamination.

### Street Area

French drain number 15 is located in the front of the office building in the employee parking lot.

#### **GROUND WATER**

### **Historic Conditions**

PCP spills occurred at the site in 1981, 1989, and 1990. One half of an adjacent mobile park (see figure 1) was on a domestic supply well. Baxter voluntarily hooked the remainder of the park to the city water supply some time after December 1992. One of the monitoring wells located at the northwest corner of the site at the property boundary slightly down gradient of the mobile home park's supply well was found to have PCP concentrations ranging from 70 to 150 ppb at the time.

The investigation work conducted by J. H. Baxter in May 1990, and the four years of DMR data submitted for the previous NPDES permits, indicated PCP to be present in the ground water downgradient from the treated wood storage area (average 79.6 ppb). Monitoring well MW-3 continues to demonstrate high concentrations of PCP.

## **Current Conditions**

As the data presented above indicates, stormwater in the treated product storage area contains environmentally significant concentrations of PCP. Composite sampling in the untreated wood storage area also seems to indicate presence of PCP at concentrations between 30 and 60 ppb. Ground water throughout the site is not currently in compliance with the State Ground Water Quality Standards. Further work at the site will be undertaken through the UIC, Water Quality, and MTCA program to ensure that all sources that may contribute to non-compliance with Ground Water Quality Standards are found and controlled. The State Ground Water Quality Standard for PCP is 1 µg/L.

#### PERMIT STATUS

The previous permit for this facility was issued on June 6, 1994, with an expiration date of June 6, 1998. The permit has been administratively extended until a renewal permit can be issued. The previous permit was issued without numeric limits because of the lack of monitoring data, which prevented development of effluent limits at the time. In addition, the ground water guidance document was in draft form and was not available for use until the spring of 1996.

An application for permit renewal was submitted to the Department on April 17, 1998, and was accepted by the Department on May 4, 1998.

### SUMMARY OF COMPLIANCE WITH THE PREVIOUS PERMIT

The facility last received an inspection on March 16, 2000. During the history of the previous permit, the Permittee remained in compliance with permit conditions regarding submission of study reports and DMRs. As discussed above, the stormwater samples collected in both the treated and untreated wood storage areas contain significant concentrations of PCP. Ground water within the treated product storage area contains concentrations of PCP that exceed the State Ground Water Quality Standards.

A downspout water sample was collected nearby the cooling tower on March 7, 1996. The sample indicated a concentration of 35,000  $\mu$ g/L PCP as analyzed by the Department, and 17,000  $\mu$ g/L as analyzed by Columbia Analytical Laboratory for J. H. Baxter. The analytical surrogate recoveries achieved by the Department and Columbia Analytical Laboratory were different during the test procedure. The Department achieved a 100% recovery and Columbia Lab. achieved a 51% recovery during the analytical procedure.

A Notice of Violation (NOV) was issued to Baxter on June 21, 1996, for exceeding the Ground Water Quality Standard of 1  $\mu$ g/L PCP. As a result of the NOV, Baxter agreed to enter a Consent Order with the Department. The final Order of Consent was issued to Baxter on January 14, 1997.

The Order required an AKART (All Known Available and Reasonable Methods of Treatment) analysis for the stormwater discharge, and an engineering report following completion of the AKART analysis. Baxter submitted an AKART analysis report on August 1, 1997, which was amended on September 1997 and January 1998. The Laboratory Study Scope of Work for the proposed Bioswale Pilot Testing Program, Phase I, submitted on January 13, 1998, was approved by the Department. The final report for Phase I was submitted on April 1, 1999.

A Dioxin/Furan Study was submitted on April 6, 1998, as required by their NPDES permit.

Since the submission of the Dioxin study, the Department's TCP reranked the site from a "4" to a "1" based on new information such as population growth, the location of the City of Arlington's drinking well, and the dioxin data, a "1" ranking being a higher priority for

### FACT SHEET FOR PERMIT No. ST-7425 J.H. BAXTER & COMPANY

cleanup. Baxter submitted a new proposed schedule to address the stormwater contamination and MTCA issues. The proposal lays out the basis for remedial actions proposed to be undertaken in concurrence with the installation of controls to address the stormwater problem. This schedule supercedes the schedule proposed in the AKART analysis.

An engineering report for installation of a carbon adsorption system for treatment of cooling feed water to the cooling tower was submitted on October 28, 1998, and was approved by the Department on November 24, 1998. As identified in the AKART Analysis report, 49.1% of the PCP in stormwater from the treated pole storage (Parcel A) and treatment facility area was found to be due to cooling tower emissions. Following the Department's approval, this carbon treatment system was installed to limit the amount of PCP resulting from cooling tower drift.

Upon the review of the DMRs submitted by the facility over the past five years, the Department's UIC program has determined that dangerous wastes have been disposed of into the french drains in the treated product storage area. The Department issued a NOV on January 28, 2000 to the facility. The facility was requested to submit a closure, sampling, and remediation report to the Department's UIC program for review and evaluation. Based on the program's review of the facility's comments, the Department is in the process of issuing an Administrative Order which instructs the facility to immediately close the french drains in the treated product storage area, prevent the creation of surface water impoundments, monitor the quality of the stormwater entering the remaining french drains in the untreated wood storage area, and properly remediate the contamination which has occurred as a result of the injection activity.

### POLLUTANTS OF CONCERN

Pollutants of concern in the stormwater discharge are primarily dioxin, furan, and PCP. Minor pollutants of concern are oil and grease, PAHs and pH. Ground water standards and the federal provisions of 40 CFR 122.44(d) require the Department to incorporate permit conditions in addition to, or at the least as stringent as EPA promulgated effluent limitation guidelines.

## STORMWATER CHARACTERIZATION

The proposed stormwater discharges have been characterized as follows. The median of the daily maximum values shown below are based on data presented on the Discharge Monitoring Reports submitted by the Permittee:

| Stormwater Runoff Data (Median Val |
|------------------------------------|
|------------------------------------|

| Parameters         | White Wood | FD # 13,14 | FD # 23 | FD # 24 | FD # 25 |
|--------------------|------------|------------|---------|---------|---------|
|                    | Area       |            |         |         |         |
| Oil & grease, mg/L | 2          | 3          | 4       | 2       | 2.5     |
| TSS, mg/L          | 1330       | 474        | 330     | 270     | 573     |
| PAH, μg/L          | 3.56       | 15.7       | 11.6    | 15.6    | 6.85    |
| PCP, µg/L          | 34         | 175        | 650     | 400     | 210     |
| Dioxin/Furan, ppq  | -          | 7729       | 1465    | 3416    | 4085    |
| pH, s.u.           | 7.2 to 7.3 | 7.7 to 7.8 | 6.98    | 7.16    | 7.725   |

## Monitoring Wells Data (Median Values)

| Parameters    | MW-1  | MW-2 | MW-3  | MW-4  | BXS-1 | BXS-2 | BXS-3 |
|---------------|-------|------|-------|-------|-------|-------|-------|
| Conductivity, | 140.7 | 197  |       | 182.9 | 296.5 | 644.5 | 851.5 |
| umho/cm       |       |      |       |       |       |       |       |
| TOC, mg/L     | -     | 5.2  | 34.05 | 1.1   | 5     | 12.45 | 34.05 |
| PAH, μg/L     | -     | 3    | 3.5   | -     | -     | -     | 2     |
| PCP, µg/L     | 1.5   | 3    | 160   | 1.0   | 34    | 1.0   | -     |

Note that the dioxin and furan data presented above is expressed in units of part per quadrillion (ppq).

### PROPOSED PERMIT LIMITATIONS AND CONDITIONS

State regulations require that effluent limitations set forth in a State Waste Discharge permit must be either technology- or water quality-based. Technology-based limitations are based upon the treatment methods available to treat specific pollutants. Technology-based limitations are set by regulation or developed on a case-by-case basis (40 CFR 125.3, and Chapter 173-216 WAC). Water quality-based limitations are based upon compliance with the Ground Water Standards (Chapter 173-200 WAC).

The effluent constituents in the application were evaluated on a technology- and water quality-basis. The limits necessary to meet the rules and regulations of the State of Washington were determined and included in this permit. The Department does not develop effluent limits for all pollutants that may be reported on the application as present in the effluent. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation. If significant changes occur in any constituent, as described in 40 CFR 122.42 (a), the Permittee is required to notify the Department.

40 CFR Part 429, Subpart H for Wood Preserving - Boulton subcategory, includes wood preserving facilities which use the Boulton process as the predominant method of conditioning stock prior to treatment. Facilities using PCP for pressure treatment of wood fall within this subcategory.

## Process Wastewater

EPA has promulgated effluent guidelines and limitations representing BPT and BAT for all woodtreaters. These provisions require woodtreaters to <u>cease discharge</u> of process wastewater pollutants into navigable waters (see page 12 of the attached model fact sheet). Stormwater associated with the retort, drip pad, and tank farm areas <u>is considered as process wastewater</u>. Thus, such stormwater also subject to Federal Effluent Guidelines, which require "zero" discharge. Special Condition S1 of the permit requires J. H. Baxter to attain "zero" discharge of process wastewater. This proposed permit does not authorize violations of RCRA, UIC or any other applicable state and federal regulations.

## Stormwater Runoff at both the treated and untreated wood storage areas

Effluent limitations for the pollutants of concern for stormwater being applied to the land surface will be set in this permit. The interim period set forth in this permit pertains to the period between the effective date of this permit and August 31, 2002. The interim effluent limitations will apply during the interim period described above.

### **Interim Effluent Limitations**

Baxter will be required to be in compliance with interim effluent limits for PCP, oil & grease, and pH beginning on the effective date of the permit and lasting through August 31, 2002. The proposed interim effluent limitation for PCP is 215  $\mu$ g/L (ppb). The proposed interim limit for oil & grease is 10 mg/L (ppm) and for pH between 6.5 and 8.5 standard units. These limits are daily maximums. The compliance point will be on the land surface

The interim limits for PCP and oil & grease are technology-based limits, which are consistent with the interim limits imposed on other PCP woodtreaters five years ago. The pH limit is based on WAC 173-200-040 (Ground Water Standards).

Samples are required to be collected in the former locations of french drains 13, 14, 23, 24, 25 and 26. The monitoring schedule for samples collected during storm events is September through May. The monitoring frequency will be once every two months, during the period of September through May.

Samples are required to be collected at french drains numbered 1 through 12, and 16, 17, 18, 19 through 21, and 22 at the untreated wood storage area. Equal volume grab samples from french drains numbered 1 through 6 may be composited into one sample. Equal volume grab samples from french drains numbered 7 through 12 may be composited into one sample. Equal volume grab samples from french drains numbered 19, 20 and 21 may be composited into one sample. Samples collected from french drains numbered 16, 17, 18 and 22 will be analyzed and reported separately. Composite sampling is allowed as specified above for the untreated wood storage area only. The monitoring frequency shall be once every 2 months, September through May.

#### **Final Effluent Limitations**

Baxter will be required to be in compliance with the final effluent limitations for PCP, dioxin/furan (TEQ), oil & grease, and pH beginning September 1, 2002, and lasting through the expiration date of the permit. The proposed final effluent limit for PCP is 1 ppb, dioxin/furan in terms of TEQ is 0.6 ppq, oil & grease is 10 ppm, and pH is between 6.5 and 8.5 standard units. These limits are maximum daily discharge. The compliance point will be on the land surface, after treatment prior to disposal.

The effluent limit for Dioxin/Furan is 0.6 ppq expressed in terms of toxicity equivalence (TEQ) for 2, 3, 7 and 8-Tetrachlorodibenzo-p-dioxin (TCDD), a ground water limit. This limit is set based on WAC 173-200 subpart 040 for Ground Water Quality Criteria. The limit is expressed in TEQ based on WAC 173-200 subpart 050(5)(b) for multiple contaminants with similar types of toxic responses, which are assumed to be additive unless evidence is available to suggest otherwise.

The term dioxins represents a class of halogenated aromatic hydrocarbon compounds including polychlorinated dibenzodioxins and dibenzofurans. There are a total of 210 possible congeners, whose physical and chemical properties vary according to the degree and position of the chlorine substitution. These congeners with chlorine substitution in the 2,3,7, and 8 positions, are thought to be responsible for the severe toxicity associated with dioxins. Thus, a few specific congeners have been identified to be analyzed as opposed to the 210 congeners. These required congeners are listed in Special Condition S8 of the permit.

For reporting, total 2,3,7,8-TCDD toxicity equivalents are required to be determined and reported by using the International Toxicity Equivalency Factors. The calculated total 2,3,7,8-TCDD toxicity equivalents may not exceed the effluent limit of 0.6 ppq. The minimum quantitation level for each specific congener is listed in the appendix, Attachment 3. If the measured effluent concentration for an individual congener is nondetected, "0" is to be applied for that congener in determining its toxicity equivalent in terms of 2,3,7,8-TCDD.

The effluent limitation for PCP is set at 1 ppb maximum daily, a ground water quality limit based on WAC 173-200-040. The effluent limit for oil & grease and pH are the same as those interim limits.

Sampling location and frequency requirements for the untreated wood storage area will be the same as those listed above under the interim compliance schedule. The sampling location for the treated product storage area will be determined based upon the approved final engineering report as required in S6 of the permit.

### GROUND WATER

The Department has promulgated Ground Water Quality Standards (Chapter 173-200 WAC) to protect beneficial uses of ground water. Permits issued by the Department are required to be conditioned in such a manner so as not to allow violations of those standards (WAC 173-200-100).

### Compliance Schedule

The compliance schedule set in the permit is as follows. Engineering reports will be required to meet all requirements in Chapter 173-240 WAC.

## A. Final Engineering Report

By March 1, 2002, Baxter shall submit a final engineering report on the proposed pavement work, stormwater treatment and disposal design for the treated product storage area resulting from the RI/FS study which was required under the MTCA Agreed Order.

## B. Construction of Stormwater Improvement Measures

By August 31, 2002, the construction of the stormwater control measures for the entire treated product storage area (Parcel A) extending to the former locations served by french drains 25 and 26, must be completed.

The compliance schedule set in this permit was based upon many discussions with J. H. Baxter. The Department initially proposed a draft permit which contained a compliance schedule requiring J. H. Baxter to achieve compliance regarding the final effluent limits, no later than January 1, 2001. However, based on comments received from J. H. Baxter in coordination with the Toxic Cleanup Program to address cleanup issues, the Department is considering revising the original proposed compliance date to September 1, 2002. Based on the public comments received during the comment period, the Department will determine a final compliance date for J. H. Baxter.

## MONITORING AND REPORTING

Monitoring, recording, and reporting are required (WAC 173-220-210 and 40 CFR 122.41) to characterize the stormwater in this permit.

The monitoring schedule is detailed in the proposed permit under Condition S.2. Specified monitoring frequencies take into accounts the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

Sampling location and frequency requirements for both the treated and untreated wood storage area are those as listed above.

Upon expiration of the interim compliance period, the monitoring location and frequency at the treated product storage area will be determined based on the approved final engineering report.

### Ground water

Ground water monitoring and reporting are required at the existing monitoring wells, BXS1 to 4 and MW1 to 4. The monitoring frequency for ground water is specified in S2.

### LAB ACCREDITATION

With the exception of certain parameters, the permit requires all monitoring data to be prepared by a laboratory registered or accredited under the provisions of Chapter 173-50 WAC, *Accreditation of Environmental Laboratories*.

#### REPORTING AND RECORDKEEPING

The conditions of S3. are based on the authority to specify any appropriate reporting and record keeping requirements to prevent and control waste discharges (WAC 273-220-210).

### OTHER PERMIT CONDITIONS

## Schedule of Compliance

The facility's proposed schedule has been incorporated in the permit. A compliance schedule of a period of twenty eight (28) months has been granted to the facility to implement necessary treatment and BMPs in order to be in compliance with the final effluent limitations.

### **Best Management Practices**

A Best Management Practices Plan is required to ensure proper management practices become an integral part of daily operations in order to prevent accidental or unpermitted releases to the waters of the state.

### Stormwater Pollution Prevention Plan

Stormwater discharges directly to ground from the Baxter Arlington site. A Stormwater Pollution Prevention Plan (which can be incorporated into the BMP Plan) is required in the permit to reduce, eliminate and prevent the pollution of stormwater, and to eliminate violations of ground water and sediment standards.

## Spill Plan

The Department has determined that the Permittee stores a quantity of chemicals that have the potential to cause water pollution if accidentally released. The Department has the authority to require the Permittee to develop best management plans to prevent this accidental release under section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080.

The Permittee has developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the Permittee to update this plan and submit it to the Department.

### Solid Waste Plan

The Department has determined that the Permittee has a potential to cause pollution of the waters of the state from leachate of solid waste.

This proposed permit requires, under the authority of RCW 90.48.080, that the Permittee update the solid waste plan designed to prevent solid waste from causing pollution of the waters of the state. The plan must be submitted to the local permitting agency for approval, if necessary, and to the Department.

## Well Construction Details

All new wells must be constructed in accordance with Chapter 173-160 WAC, part 1 and 3. Figure 7 in Chapter 173-160 WAC illustrates the well construction.

#### **GENERAL CONDITIONS**

General Conditions are based directly on state and federal law and regulations and have been standardized for all individual state waste discharge permits issued by the Department.

Condition G1 requires responsible officials or their designated representatives to sign submittals to the Department. Condition G2 requires the Permittee to allow the Department to access the treatment system, production facility, and records related to the permit. Condition G3 specifies conditions for modifying, suspending or terminating the permit. Condition G4 requires the Permittee to apply to the Department prior to increasing or varying the discharge from the levels stated in the permit application. Condition G5 requires the Permittee to construct, modify, and operate the permitted facility in accordance with approved engineering documents. Condition G6 prohibits the Permittee from using the permit as a basis for violating any laws, statutes or regulations. Conditions G7 and G8 relate to permit renewal and transfer. Condition G9 requires the Permittee to control its production in order to maintain compliance with its permit. Condition G10 prohibits the reintroduction of removed substances back into the effluent. Condition G11 states that the Department will modify or revoke and reissue the permit to conform to more stringent toxic effluent standards or prohibitions. Condition G12 notifies the Permittee that additional monitoring requirements may be established by the Department. Condition G13 requires the payment of permit fees. Condition G14 describes the penalties for violating permit conditions.

## PERMIT ISSUANCE PROCEDURES

### PERMIT MODIFICATIONS

The Department may modify this permit to impose numerical limitations, if necessary, to meet Water Quality Standards for Ground Water based on new information obtained from sources such as inspections, effluent monitoring, and outfall studies.

The Department may also modify this permit as a result of new or amended state or federal regulations.

### RECOMMENDATION FOR PERMIT ISSUANCE

This proposed permit authorizes stormwater associated with industrial activity to be discharged onto the land surface, and includes the requirement that all conditions set forth in the permit must be complied with. The Department proposes that this proposed permit be issued with an expiration date of June 30, 2004, in order to be consistent with the Island/Snohomish Water Quality Management Area Basin planning schedule.

### REFERENCES FOR TEXT AND APPENDICES

### J. H. Baxter

- 1998. Storm Water, form 2F and D discharge of Industrial Wastewater to Ground Permit Applications.
- 1994-1998. Miscellaneous Report and Data Submittals.

## Environmental Protection Agency (EPA)

- 1992. <u>National Toxics Rule.</u> Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.
- 1991. <u>Technical Support Document for Water Quality-based Toxics Control</u>. EPA/505/2-90-001.
- 1988. <u>Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling</u>. USEPA Office of Water, Washington, D.C.
- 1985. Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water. EPA/600/6-85/002a.
- 1983. Water Quality Standards Handbook. USEPA Office of Water, Washington, D.C.
- 1989. 40 CFR 429, Subpart A for Wood Preserving Boulton Subcategory.
- Tsivoglou, E.C., and J.R. Wallace
  - 1972. <u>Characterization of Stream Reaeration Capacity</u>. EPA-R3-72-012. (Cited in EPA 1985 op.cit.)

## Washington Administrative Codes

- 1990. <u>Water Quality Standards for Ground Water Quality Standards.</u> Publication Number 96-02.
- 1992. Water Quality Standards for Surface Waters of the State of Washington, Chapter 173-20 WAC.
- 1984. <u>Underground Injection Control Program, Chapter 173-218 WAC.</u>

### Washington State Department of Ecology

- 1994. Permit Writer's Manual. Publication Number 92-109
- Wright, R.M., and A.J. McDonnell.
  - 1979. <u>In-stream Deoxygenation Rate Prediction</u>. Journal Environmental Engineering Division, ASCE. 105(EE2). (Cited in EPA 1985 op.cit.)

### APPENDIX A—PUBLIC INVOLVEMENT INFORMATION

The Department has tentatively determined to reissue a permit to the applicant listed on page 1 of this fact sheet. The permit contains conditions and effluent limitations which are described in the rest of this fact sheet.

Public notice of application was published on November 18, 1997, in *Skagit Valley Herald* to inform the public that an application had been submitted and to invite comment on the reissuance of this permit.

The Department will publish a Public Notice of Draft (PNOD) on June 1, 1999, in *Skagit Valley Herald* to inform the public that a draft permit and fact sheet are available for review. Interested persons are invited to submit written comments regarding the draft permit. The draft permit, fact sheet, and related documents are available for inspection and copying between the hours of 8:00 a.m. and 5:00 p.m. weekdays, by appointment, at the regional office listed below. Written comments should be mailed to:

Water Quality Permit Coordinator Department of Ecology North West Regional Office 3190-160<sup>th</sup> Avenue SE Bellevue, WA 98008-5452

Any interested party may comment on the draft permit or request a public hearing on this draft permit within the thirty (30) day comment period to the address above. The request for a hearing shall indicate the interest of the party and reasons why the hearing is warranted. The Department will hold a hearing if it determines there is a significant public interest in the draft permit (WAC 173-216-100). Public notice regarding any hearing will be circulated at least thirty (30) days in advance of the hearing. People expressing an interest in this permit will be mailed an individual notice of hearing (WAC 173-216-090).

The Department will consider all comments received within thirty (30) days from the date of public notice of draft indicated above, in formulating a final determination to issue, revise, or deny the permit. The Department's response to all significant comments is available upon request and will be mailed directly to people expressing an interest in this permit.

Further information may be obtained from the Department by telephone, (425) 649-7201, or by writing to the address listed above.

This permit and fact sheet were written by Jeanne Tran, P.E.

### APPENDIX B—GLOSSARY

- **AKART**—An acronym for "all known, available, and reasonable methods of treatment."
- **Best Management Practices (BMPs)**—Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the State. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs
- **Bypass**—The intentional diversion of waste streams from any portion of a treatment facility.
- **Compliance Inspection Without Sampling**—A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.
- Compliance Inspection With Sampling—A site visit to accomplish the purpose of a Compliance Inspection Without Sampling and as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Additional sampling may be conducted.
- Composite Sample—A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots.)
- **Engineering Report**—A document which thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report shall contain the appropriate information required in WAC 173-240-060 or 173-240-130.
- **Grab Sample**—A single sample or measurement taken at a specific time or over as short period of time as is feasible.
- Industrial Wastewater—Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business, from the development of any natural resource, or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated stormwater and, also, leachate from solid waste facilities

- **Minimum Quantitation Level ()**—The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is above zero and is determined from analysis of a sample in a given matrix containing the analyte.
- **Responsible Corporate Officer**—A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding \$25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).
- **Total Suspended Solids (TSS)**—Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.
- **State Waters**—Lakes, rivers, ponds, streams, inland waters, ground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.
- **Stormwater**—That portion of precipitation that does not immediately evaporated.
- Water Quality-based Effluent Limit—A limit on the concentration of an effluent parameter that is intended to prevent the concentration of that parameter from exceeding its water quality criterion after it is discharged into a receiving water.

# APPENDIX C—SITE MAPS

# APPENDIX D—RESPONSE TO COMMENTS